Montana Fish, Wildlife & Parks

Miles City Hatchery
Pond Liner Repair
FWP# 7113103
ADDENDUM NO. 2

TO: **All Plan Holders on Record**

FROM: **Kenneth Phillips, P.E.**

DATE: **August 3, 2012**

Acknowledge receipt of this addendum by inserting its number and date in the Proposal Form and on the Bid Envelope. Failure to do so may subject bidder to disqualification.

The following clarifications or modifications are to be incorporated into the bid documents for the Miles City Hatchery Pond Liner Repair.

1. Modification -Plan set – Add sheet 1A/1 to the set of plans. This plan represents the work to be performed under the Additive Alternate No. 1.

2. Modification – Sheet 3, add note; there is a two inch Sch 40 PVC airline that is adjacent to the kettle approximately two feet from top of liner that is not shown on the plans. Contractor has the option to neatly cut the pipe to below the working grade temporarily cap the pipe and then after grading extend pipe back out with a coupler. Contractor is to seal around pipe with a boot. See attached sheet marked Air line Details.

3. Modification – Plan Set, Sheet 4, Notes for Pond 18, Add at the end of note A. Contractor shall provide salvaged liner to Owner.

4. Modification - Bid Proposal – Replace Proposal in original bid set with revised proposal included with this addendum. This proposal reflects adding Additive Alternate No. 1, Pond 31 repairs.

5. Modification – Specification Section 02230, Part 1.3.C. Add note 2. Owner will engage testing firm to establish initial compaction testing to establish roller patterns for upper key and road compaction. CONTRACTOR is responsible to coordinate the testing. Owner may follow up with additional testing but if test fail contractor will be responsible for retesting until compaction is achieved.

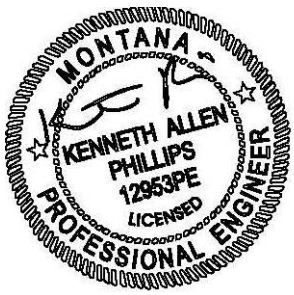
6. Clarification – Specification Section 02375, part 3.3, G – Since the cellular confinement system is on a side slope, contractor and owner will discuss best practices to achieve compaction during initial compaction process to prevent damage to the system. Approved methods would be hoe bucket tamping or hoe mounted roller compactor or equal.

7. Clarification – Specification Section 02276, Part 3.2.1 Add; all vegetative matter shall be removed from area of liner installation down to the roots and disposed of offsite.

8. Informational – General Work Sequencing. Ponds 28, 27, 26 & 23 are suspected to be in somewhat saturated conditions as they are just being drained. It is highly recommended that the contractor uncover this work at the very start of project to allow soils to dry to a more suitable moisture condition.

All other contract requirements remain unchanged. End of addendum.

Attachments



PROPOSAL

Miles City Fish Hatchery
Pond Liner Repair
(Revised)

FWP# 7113103

Montana Fish, Wildlife & Parks
Design and Construction Section
PO Box 200701
600 North Park Avenue
Helena, Montana 59620-0701

The undersigned, having familiarized himself with the conditions of the work and the contract documents as prepared **Design & Construction Section; P.O. Box 200701 Helena Montana 59620-0701; Phone 406 841-4006,** agrees to furnish all labor, materials, equipment, and services necessary to complete all general construction work, as bid herein, for a project entitled **Miles City Fish Hatchery Pond Liner Repairs** in accordance with the Contract Documents including all Addenda. The bidder agrees to perform all the work described below at the price shown as follows:

Base Bid:

Item #	Description	Estimated Quantity	Unit Measure	Unit Price	Amount
1	Mobilization/Demobilization	1	LS	LS	
2	Replace portion of liner pond 18	1256	SY		
3	Replace portion of liner pond 20	1233	SY		
4	Repair end slump on pond 20	1	LS	LS	
5	Repair end slump and portion of liner on pond 23	1	LS	LS	
6	Repair end slump pond and portion of liner pond 26	1	LS	LS	
7	Repair end slump pond 27	1	LS	LS	
8	Repair end slump pond 28	1	LS	LS	
9	Misc liner tear repair	100	LF		
				Total:	**$_____**

BASE BID:_____

_____ AND _____/100 DOLLARS ($_____).

ADDITIVE ALTERNATE #1:

Item #	Description	Estimated Quantity	Unit Measure	Unit Price	Amount
1	Pond 31 replace end liner, repair slump on end and side as described on Addendum #2	LS	LS		
				Total:	**$_____**

ADDITIVE ALTERNATE # 1:_____

AND _____/100 DOLLARS ($_____).

And certifies that he is a duly and regularly licensed contractor registered with the Montana Department of Labor and Industry:

FIRM NAME: _____

TELEPHONE #: _____ FAX#: _____

BY: _____

REGISTRATION # : _____

BUSINESS ADDRESS: _____

_____

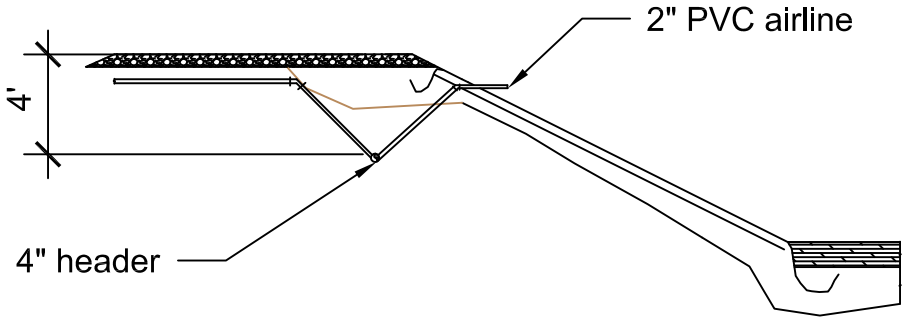
E-MAIL ADRESS: _____

This bidder acknowledges receipt of the following addenda:

ADDENDUM NO. _____ DATED

ADDENDUM NO. _____ DATED

ADDENDUM NO. _____ DATED

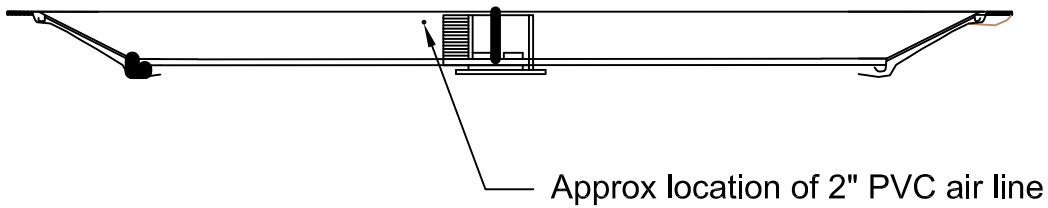


Road & Pond Xsection (nts)

Notes this Sheet

A. Contractor to protect existing airline piping during bank stabilization. Contract may leave pipe as is or may cut and recouple pipe as described in addendum.

B. Contractor to install manufacturer's approved boot around piping after liner installation.



End View (nts)

K Phillips 8/2012 DRAWN BY: DATE: CHECKED BY: DATE:	REVISED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	Montana Fish, Wildlife & Parks	Air Line Details Miles City Hatchery	7113103	SHEET: 1 of 1

PIONEER
TECHNICAL SERVICES, INC.
P.O Box 3445, Butte, MT 59702
www.pioneer-technical.com

May 17, 2012

Mr. Kenneth Phillips, P.E.
MT FWP Design & Construction
PO Box 200701
Helena, MT 59620

RE: Miles City Hatchery
Pioneer Technical Services Project No. 16636

Dear Mr. Phillips,

On May 10th, a sample from the Miles City Hatchery Project was delivered to our ASTM/AASHTO accredited materials testing laboratory. The sample was referenced as 'Miles City Liner' and given Lab No. 12616. The testing request was:

- Standard Test Method for Particle-Size Analysis of Soils (ASTM D422);
- Liquid Limit, Plastic Limit and Plasticity Index of Soils (ASTM D4318);
- Proctor Moisture/Density Relationships (ASTM D698 Method A);
- Standard Test Method for pH of Soils (MT 232); and,
- Standard Test Method for Water-Soluble Sulfate in Soil (MT 232).

Table 1 – Corrosivity Testing Results

Lab No.	pH (s.u.)	Soluble Sulfate (%)
12616	8.4	0.1679

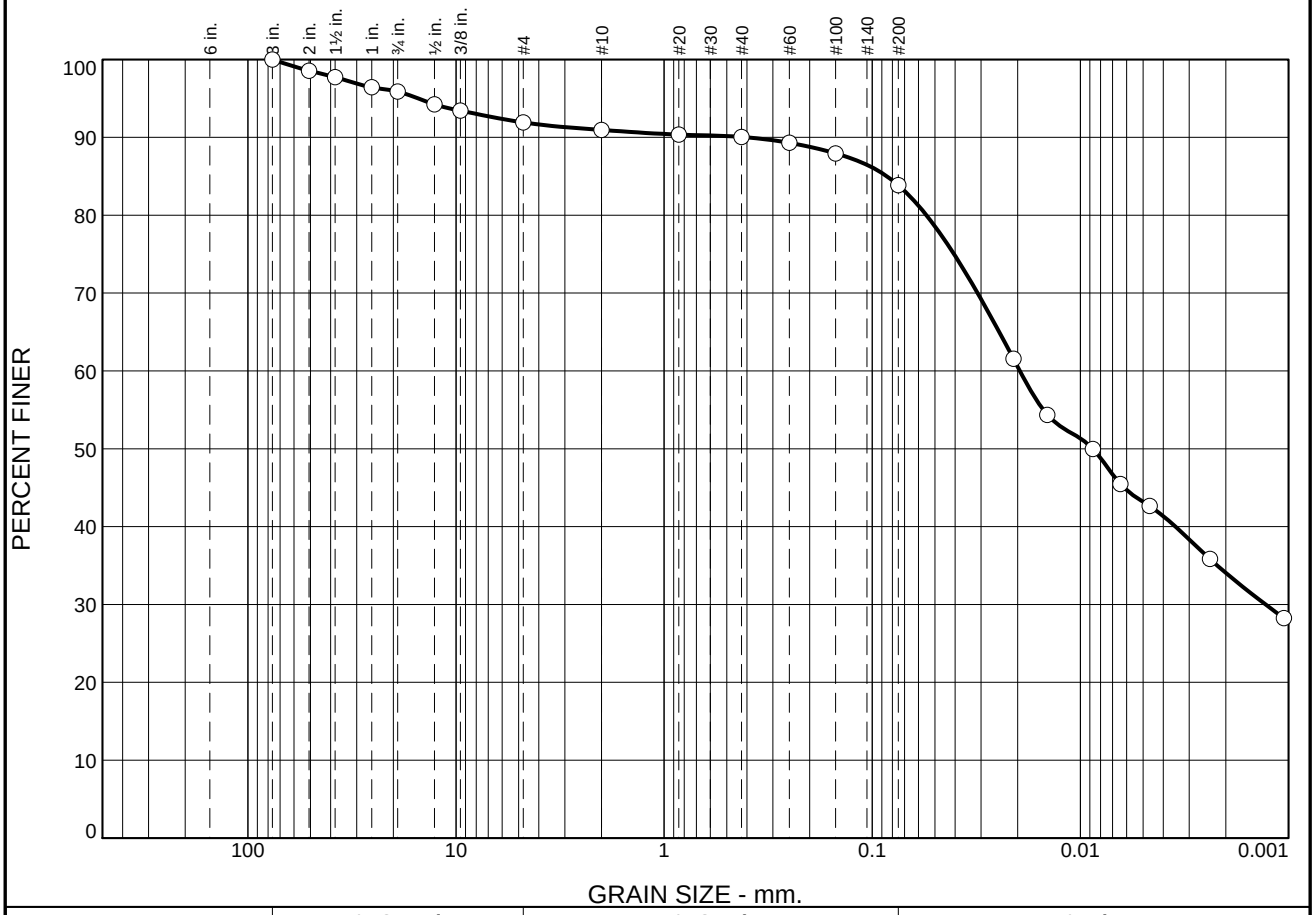
The grain size distribution chart, Atterberg limits chart, USDA textural classification chart and the Proctor curve are included with this report. We thank you for using Pioneer Technical Services for your geotechnical and materials testing requirements. If you have any questions regarding these results, please contact Todd Lorenzen or Paul Bushnell at (406) 443-6053.

Sincerely,
PIONEER TECHNICAL SERVICES, INC.

Todd Lorenzen, P.E.
Senior Geotechnical Engineer

Paul Bushnell
Materials Testing Supervisor

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	4	4	1	1	6	41	43

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100		
2	99		
1.5	98		
1	96		
.75	96		
.5	94		
.375	93		
#4	92		
#10	91		
#20	90		
#40	90		
#60	89		
#100	88		
#200	84		

* (no specification provided)

Material Description

fat clay with sand

Atterberg Limits

PL= 16 LL= 58 PI= 42

Coefficients

D_{90}= 0.4005 D_{85}= 0.0851 D_{60}= 0.0195
D_{50}= 0.0087 D_{30}= 0.0013 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(36)

Remarks

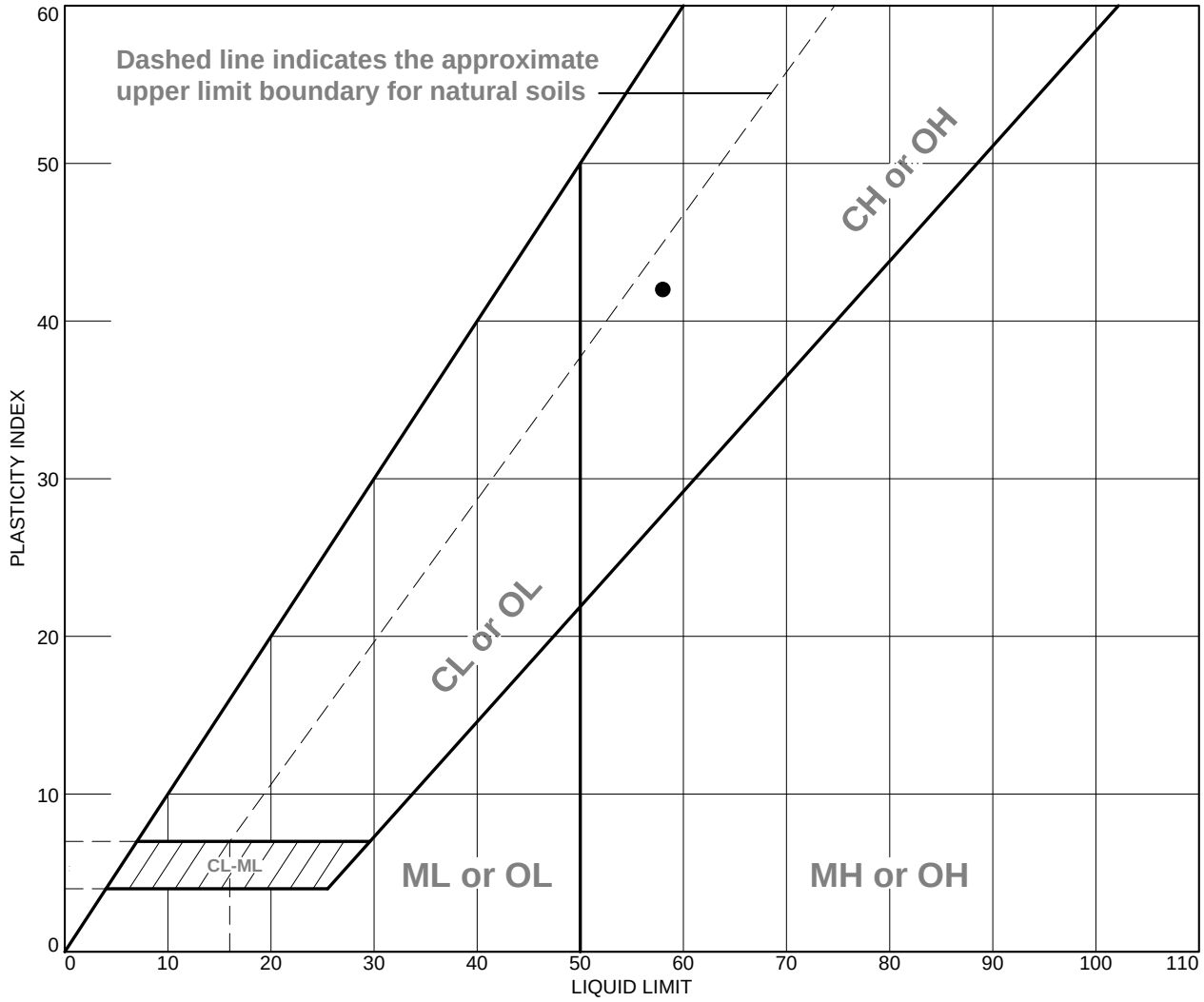
Source of Sample: Miles City Liner
Sample Number: 12616 **Date:**

PIONEER TECHNICAL SERVICES, INC.

Client: MT FWP Design & Construction
Project: Miles City Hatchery

Project No: 16636 **Figure**

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	fat clay with sand	58	16	42	90	84	CH

Project No. 16636 **Client:** MT FWP Design & Construction

Project: Miles City Hatchery

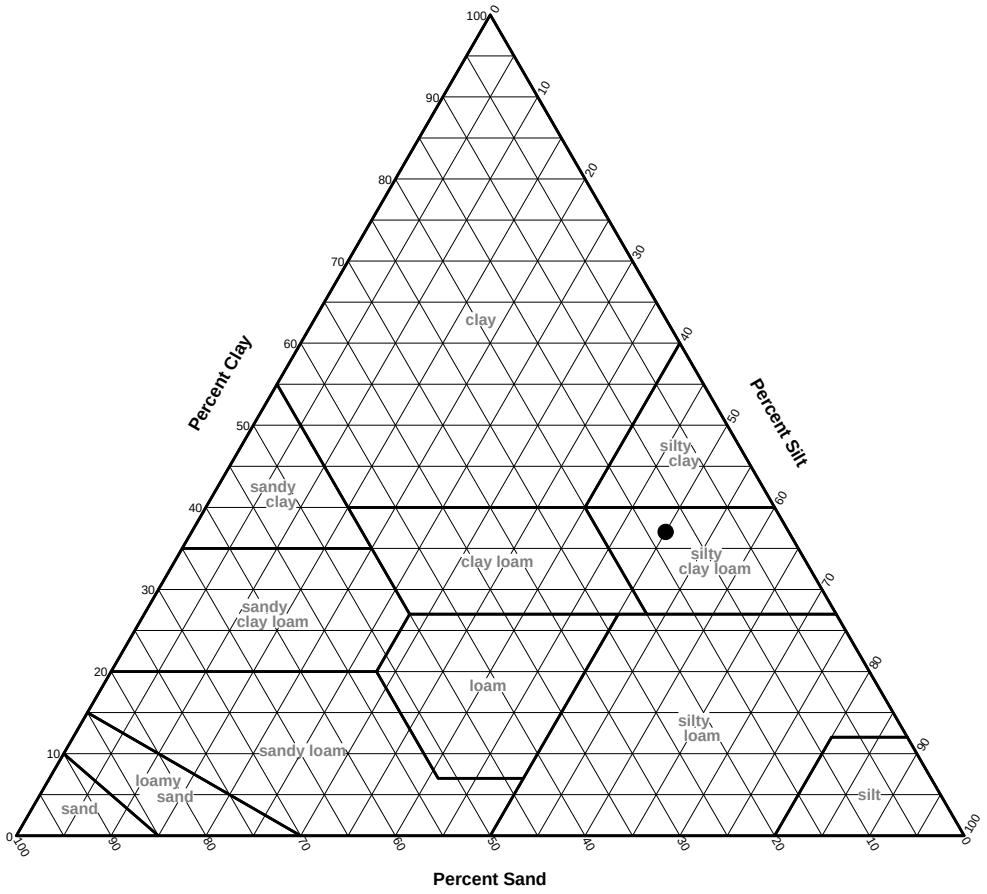
● **Source of Sample:** Miles City Liner **Sample Number:** 12616

Remarks:

PIONEER TECHNICAL SERVICES, INC.

Figure

USDA Soil Classification



SOIL DATA							
	Source	Sample No.	Depth	Percentages From Material Passing a #10 Sieve			Classification
				Sand	Silt	Clay	
●	Miles City Liner	12616		13	49	37	Silty clay loam

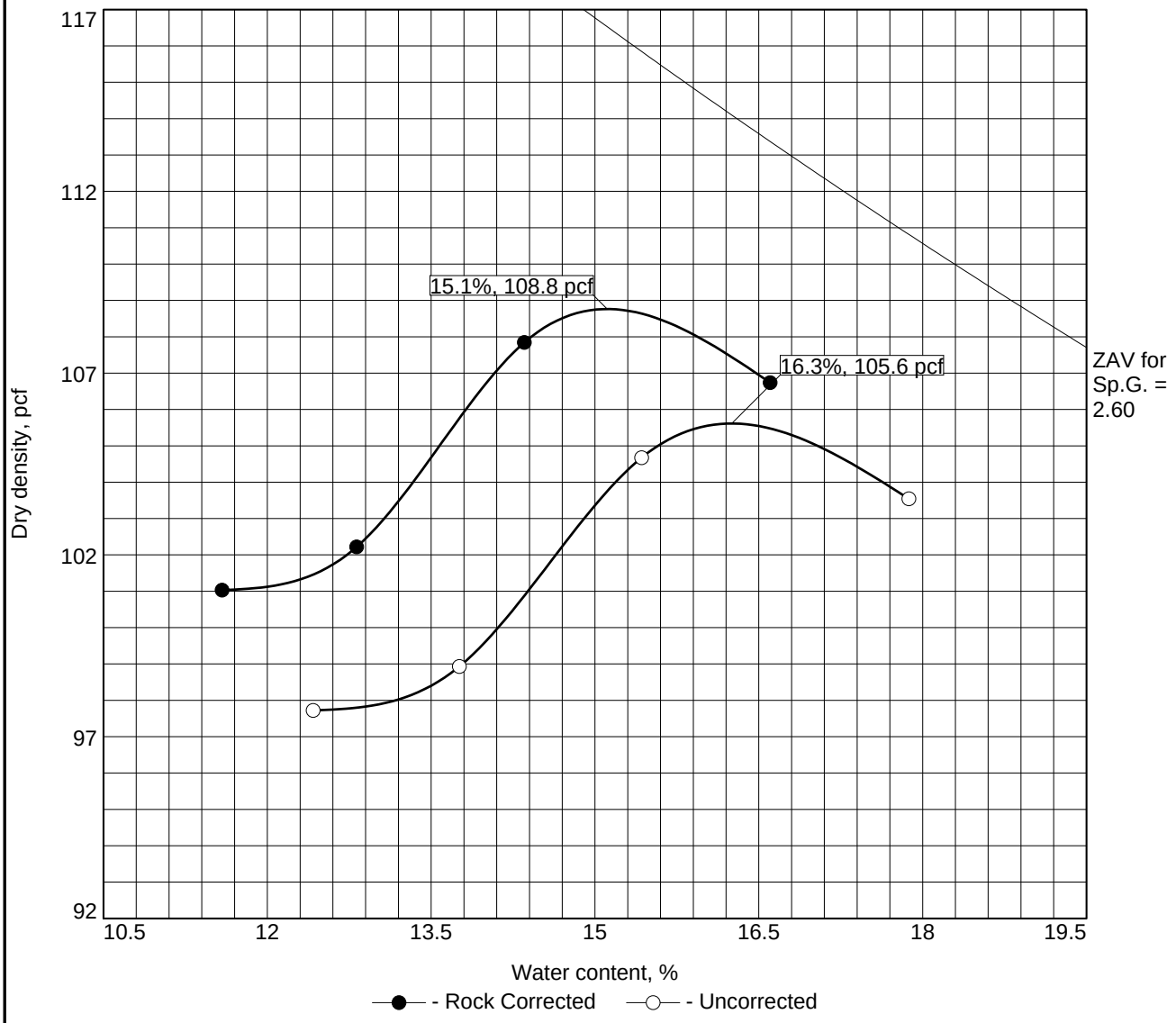
PIONEER TECHNICAL SERVICES, INC.

Client: MT FWP Design & Construction

Project: Miles City Hatchery

Project No.: 16636 **Figure**

COMPACTION TEST REPORT



Test specification: ASTM D 698-07 Method A Standard
ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
	CH	A-7-6(36)			58	42	8	84

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 108.8 pcf	105.6 pcf	fat clay with sand
Optimum moisture = 15.1 %	16.3 %	

Project No. 16636 **Client:** MT FWP Design & Construction

Project: Miles City Hatchery

○ **Source of Sample:** Miles City Liner **Sample Number:** 12616

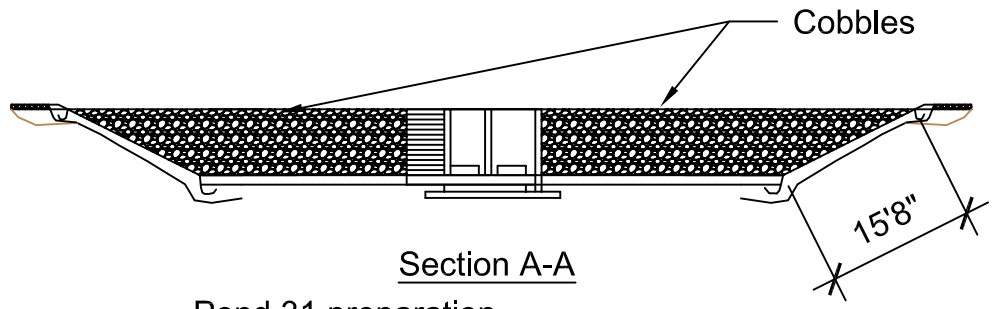
Remarks:

PIONEER TECHNICAL SERVICES, INC.

Figure

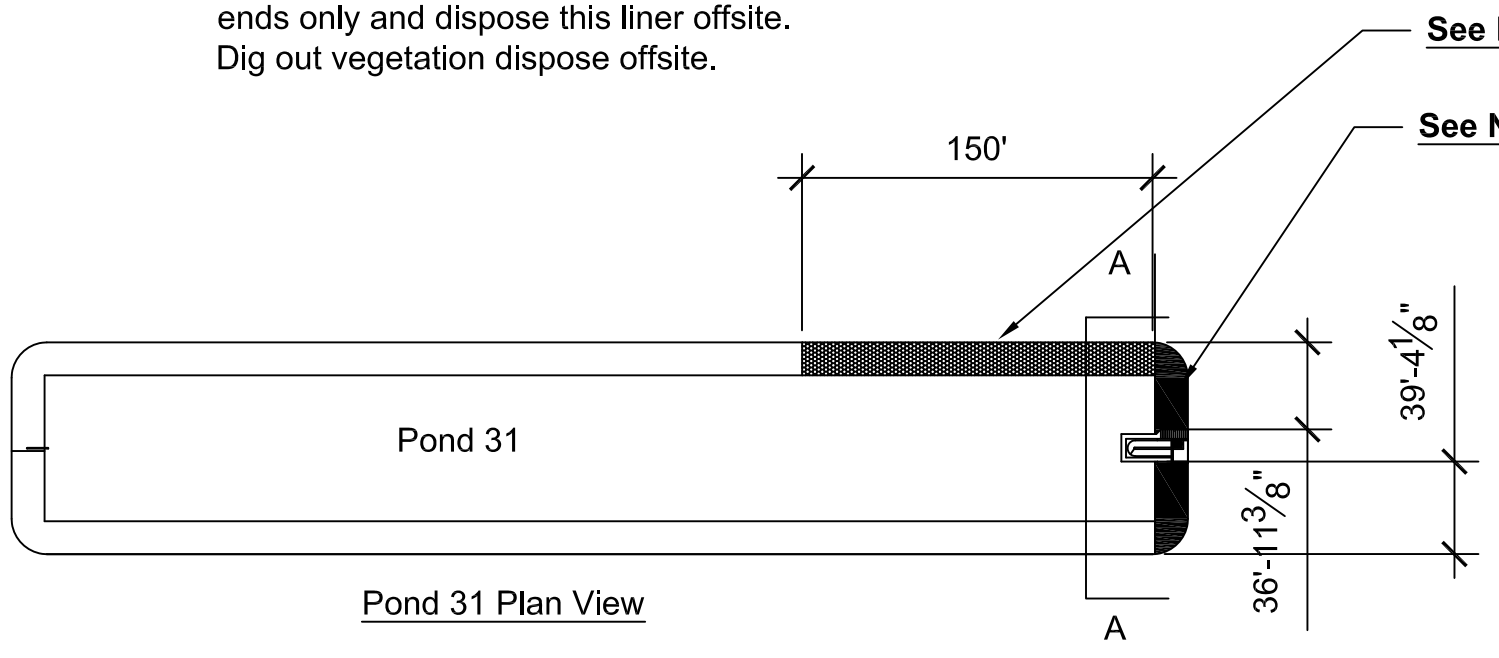
Pond 31 side view

Pond 31 end view



Section A-A

Pond 31 preparation
Remove existing cobbles from on top of existing liner.
Salvage existing cobbles to owner. Stockpile adjacent to pond 30
Remove termination strips tieing liner to concrete kettle and liner from ends only and dispose this liner offsite.
Dig out vegetation dispose offsite.

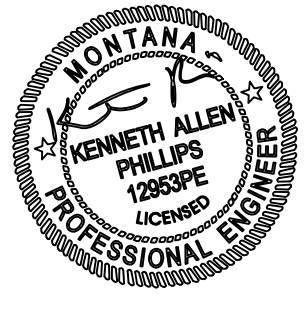


Pond 31 Plan View

Notes for pond 31

A. Remove sandbags (shown in photo) from slope and dispose.
Cut Liner at 150 foot mark to allow for folding down.
Fold down liner, regrade slope and install geoconfinement system as described on sheet 3.
Transition slope to existing ground and then re-weld liner.
Rekey top of liner and restore roadway.

B. Refer to Section A-A and preperation notes.
Remove liner entirely from end cutting at existing corners.
Regrade and install Geoconfinement system as described on sheet 3.
Install new liner and weld to existing liner at corners.
Reinstall existing termination strips.
Rekey top and bottom and restore roadway.



KPHILLIPS 8/2012 DRAWN BY: DATE: CHECKED BY: DATE:	REVISED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	Montana Fish, Wildlife & Parks	Miles City Hatchery Hatchery Liner Repairs	Addendum #2 Pond 31 Repairs #7113103	SHEET: 1A of 1